
Dutchess County Public Transit

Transit Service Evaluation and Analysis for Bus Routes within the City of Poughkeepsie



Prepared by TransPro Consulting
February 2018

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Introduction

The goals of this report are to:

1. Provide an analysis of origin-destination data on routes in the City of Poughkeepsie.
2. Examine customer satisfaction for bus routes within the City of Poughkeepsie.
3. Develop recommended baseline improvements to the existing transit system supported by quantitative and qualitative data.

This report begins with a detailed overview of the methodology for data collection as the basis of this study. This is followed by a detailed analysis of customer satisfaction data, origins and destinations, data from stakeholders, and preliminary recommendations.

Background

On June 30, 2017, the City of Poughkeepsie discontinued transit service, and Dutchess County Public Transit expanded its transit service with four new routes within the City of Poughkeepsie. The Dutchess County Department of Public Works engaged TransPro Consulting in August 2017 to conduct an independent evaluation of the routes, and through this analysis, provide recommendations for optimizing transit service for customers.

Methodology

TransPro performed independent customer satisfaction surveys and ride checks on seven routes within the City of Poughkeepsie. The ride checks included boarding and alighting tallies for each stop on these routes, providing a one-day snap shot of ridership for routes CJ, CK, CL, CM, CP, CN and CO. In addition to conducting ride checks, TransPro developed and implemented a survey instrument to gauge customer perceptions and satisfaction of the service. Surveyors received training from the TransPro staff and performed their investigations onboard each route. These ride checks and surveys were conducted September 20-22, 25-27, 30, and October 3-5, 2017. A total of 117 customers were surveyed.

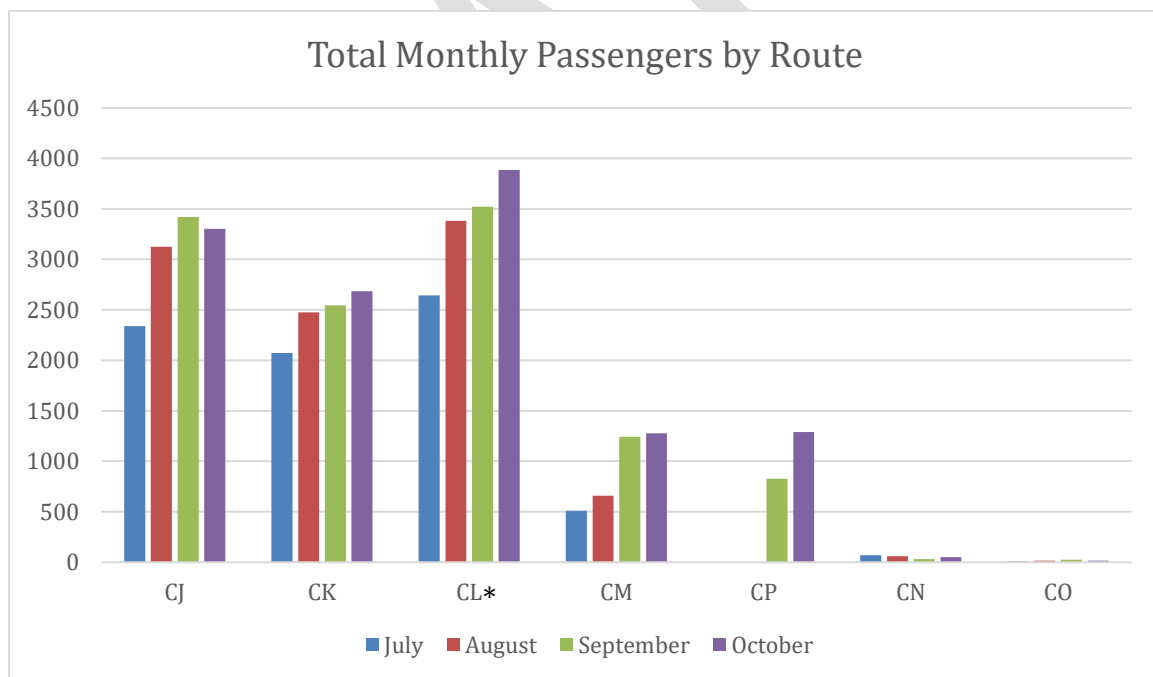
TransPro also utilized Manual Passenger Count data provided by the Division of Public Transit for July, August, September and October of 2017. In addition to quantitative data collection, TransPro conducted three outreach meetings to various stakeholder groups on Thursday, October 26, 2017. The three stakeholder groups were organized as follows:

- Group 1: Internal stakeholders, including staff from the Division of Public Transit, Department of Public Works, and other relevant departments.
- Group 2: Transit Management of Dutchess County Staff
- Group 3: Selected members of the public, including representatives from educational stakeholder institutions

These sessions provided valuable information on critical areas of concern for the community and the corresponding back-end challenges on which they are predicated. TransPro also facilitated a public open house hosted by Dutchess County Public Transit at the Hudson Community Center on November 15, 2017 to solicit feedback on preliminary study recommendations. Members of the public were given an opportunity to engage with both TransPro and Dutchess County Public Transit staff about challenges and opportunities for transit within the City of Poughkeepsie. With all of the information in hand, TransPro engaged in an iterative process to develop revised service routes and operational scenarios.

Poughkeepsie Transit Route Ridership Profile

The City of Poughkeepsie is currently served by seven distinct transit routes with connections to regional bus routes via the transit Hub on Market Street. Routes CJ, CK, CL, CM, and CP provide weekday and Saturday service; route CN provides service on Mondays only, and route CO provides Friday-only service. On September 1, 2017, the routes within the city of Poughkeepsie were changed, and the CP route was added. Total passenger trips across all City routes increased 38% when comparing manual passenger count data for July and August (before new routes launched) with September and October (after new routes launched).



*Route CL served portions of Route CP in July & August during the a.m. and p.m. peak periods.

Figure 1. This graph illustrates APC recorded boardings for July through October on all routes within the City of Poughkeepsie.

The majority of customers surveyed had used the public transit system prior to July 1, 2017 when Dutchess County Public Transit began operating routes within the City of Poughkeepsie. Nine percent of customers began using public transit routes in the city of Poughkeepsie following July 1, 2017.

78% of customers surveyed ride the bus at least 3 times per week, with 39% of customers surveyed riding it 5 or more days per week.

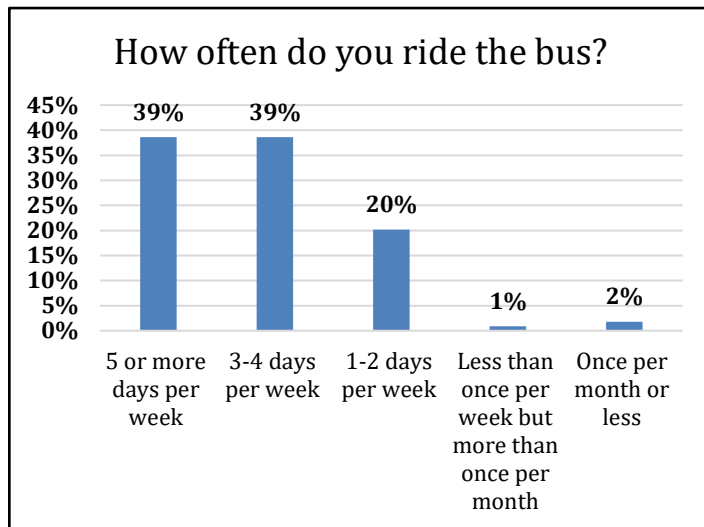


Figure 2. This chart indicates transit utilization frequency within any given week.

Nearly half (42%) of customers surveyed utilize transit for commuting to work, while 29% of customers surveyed use it for shopping. Three quarters (75%) of surveyed customers describe themselves as transit dependent. Among the 25% of surveyed choice riders (those who are not dependent on transit), more than half (52%) indicated that convenience and cost savings were their primary reasons for utilizing transit services.

Stakeholder Outreach

This section of the report outlines major findings from each of the stakeholder groups.

Bus Operators

- Route CM has low ridership and does not provide access to the Hub.
- The Manor at Woodside facility has its own bus service that may be providing duplicative services. Ridership is low or nonexistent to/from the Manor at Woodside on routes CN and CO.
- Route CP is difficult to keep on schedule because of routing in the northern portion of the route.
 - Portions of this route currently produces low/no ridership.
- Customers seem satisfied with the Route I, but express a need for more streamlined integration with other routes in Poughkeepsie.
- The Route CJ stops service up New York State Route 9G before 7PM and misses a lot of commuters.
- Demand for bikes on bus racks is low.
- A single consistent fare/transfer policy will streamline operations.
- Bus Operators are using Reynolds Avenue to park buses in between runs and complete paperwork.

Internal Stakeholders

- Routes CK, CJ, and CL have high flagging rates.
- Route CM does not get people to the Hub (people have to walk two blocks).
- The transit app is not functional on routes operating within the city of Poughkeepsie.
- Route frequencies should be set at standard increments (30, 60, 90 minutes).
- Route CP designations should be clearly posted at bus stops.

Selected Public Stakeholders

- The bus route map indicates that the operations garage is included as a stop on all of the routes.
- Family Services Partnership, Hudson Valley Community Center, and the Boys & Girls Club all have a lot of after school programs, but there is not a lot of transit service to these locations. This is a big issue for younger kids in elementary school who cannot walk as far.
- ADA access to transit is difficult because of station and stop locations, a lack of knowledge of the precise bus stop locations, and the physical requirements for getting on the bus.
- Transit customer service staff needs special training for people with disabilities.
- Traffic on Route 9 delays buses.
- Buses are not matching up on schedules, making wait times longer for transfers.
- Bus maps and schedules are difficult to understand.

November 15, 2017 Dutchess County Public Transit Open House Comments

- There's a segment of Route CL going from garage to hub that isn't running all the time but is depicted on map
- Route CM route, should connect at Hub
- The bus that serves the school serves school in AM and afternoon, but otherwise not useful
- Need better synched transfers and connections
- Buses need to start earlier in the morning... First buses in the morning are packed.
- The bus doesn't stop directly in front of ShopRite
- Routes/stops are in unsafe locations – Route CK southbound, have to walk on windy road with no sidewalk; Route CL has stop at busy intersection
- Buses not frequent enough and have too many long gaps – customers utilizing the bus for shopping finish shopping and have to wait a long time for next bus

- Signage on buses needs to be more visible on front, back, and side so customers can see if it's the desired bus (larger letters, illuminated, etc)
- Customers want signs at bus stops with real-time information
- Shelter and seating at bus stops is needed
- Cars parked at bus stops, can obstruct vision and buses end up passing customers waiting for bus
- The Hub needs to be warmer and more weather protected
- *See Appendix C for log of written customer comments from the Open House.*

Customer Preference & Satisfaction Data

TransPro's survey instrument deployed during ride checks included questions focusing on customer satisfaction. In aggregate and as compared to other transit systems, Dutchess County Public Transit currently has low levels of customer satisfaction. While customers surveyed directly indicate a 72% level of overall satisfaction, word-of-mouth favorability falls well below the industry average for transit agencies (see net promoter score below). In light of this information, it is important to note that the timing of this data immediately followed the route change. As a result, some of the customer satisfaction data may be attributed to reactionary attitudes toward service changes. It is anticipated that customer satisfaction will increase naturally as these routes mature. This analysis provides a baseline of focus areas where the Dutchess County Public Transit can proactively work to increase customer satisfaction levels.

Summary of Key Findings

The following points are key takeaways from the detailed data in the below sections:

- Customers rated On-Time Performance as the most important service element and On-Time Performance received the fourth lowest satisfaction rating by customers compared to other service elements.
- Only 57 percent of customers surveyed agree that Dutchess County Public Transit's schedules and maps are easy to understand.
- 17 percent of customers surveyed who called Dutchess County Public Transit customer service indicate their issues were not resolved.
- Only 67 percent of customers surveyed who called Dutchess County Public Transit customer service indicate their calls were answered promptly.

Net Promoter Score

The net promoter score (NPS) is a metric for gauging customer loyalty and word-of-mouth favorability. This method was developed by the Harvard Business School, and enables performance comparisons between organizations across business sectors. The NPS is calculated by subtracting the percentage of customers who are detractors from the percentage of

customers who are promoters of the service. Across industries, internet service providers have a low average NPS of 5%, airlines have an average NPS of 23%, and popular brands such as Apple and Disney have an NPS of 70%. As a peer to peer comparison, transit agencies have an average Net Promoter score of 12%.

Dutchess County Public Transit has an overall NPS of 0% amongst customers surveyed, indicating that the number of detractors is equal to the number of promoters, and the passive promoters (those who would neither recommend nor speak against transit service) are high. Approximately one third (31%) of customers surveyed indicated that they had contacted customer service in the past three months. Of those contacting customer service, 83% indicated that their issue was resolved. Among the 17% of customers with unresolved issues, NPS scores tended to be lower than those who indicated that their problems were resolved.

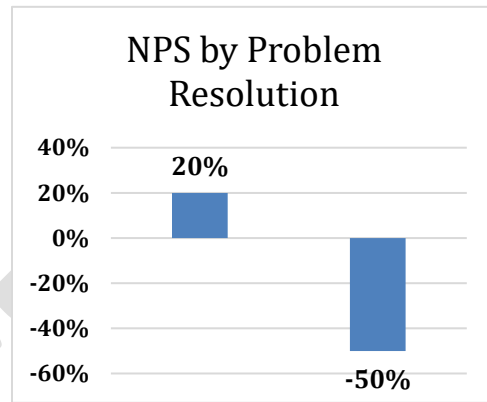


Figure 3. This chart compares the average NPS of customers surveyed who reported resolutions to problems (20%) versus the average NPS of customers who reported that problems were unresolved (-50%).

Customer Preferences

Customers surveyed were asked to rank the four most important elements of service to them, prioritizing them from most important to fourth most important. Most important elements received 4 points on a scale; second-most important received 3 points; third-most received 2; and fourth-most received 1.

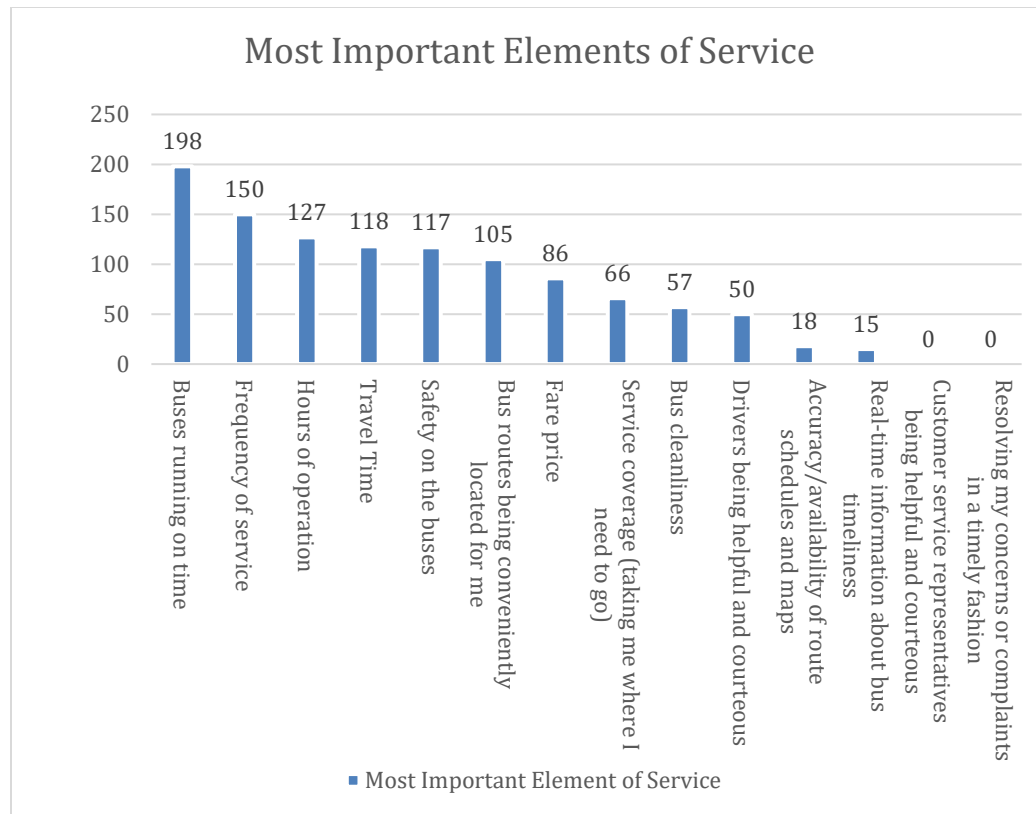


Figure 4. This chart outlines the most important elements of transit service as rated by customers.

Customers rated on-time performance as the most important element of the service. Frequency of service, hours of operation, travel time, safety on the buses, and conveniently located bus routes were the next most important elements of service.

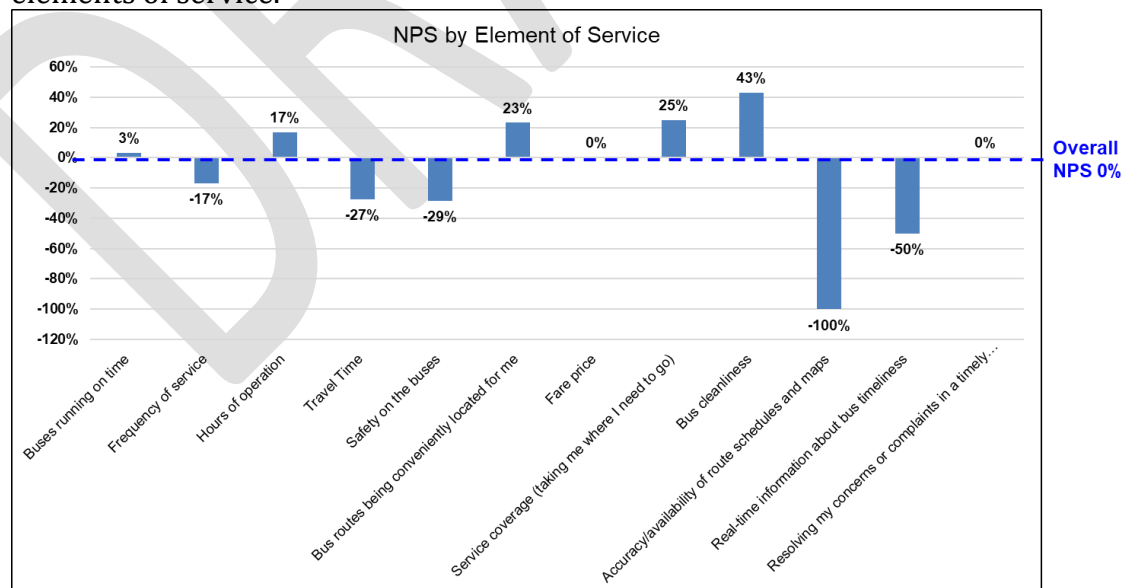


Figure 5. This chart outlines each element of service by individual net promoter score as compared to the agency's overall net promoter score.

Examining these factors individually by net promoter score, there are several elements which stand out. Accuracy and availability of route schedules and

maps is rated exceptionally low. There is also a significant level of dissatisfaction with availability with real-time availability of information. Travel time, safety and frequency of service – three of the top five most important elements of service to customers – also received poor NPS scores.

Customer Perceptions

Less than 60% of customers surveyed agree that buses usually arrive on time, that the frequency of service is satisfactory, and that the buses operate at the days and times they need them. A slightly higher percentage (69%) of customers surveyed believe that travel time on buses is reasonable.

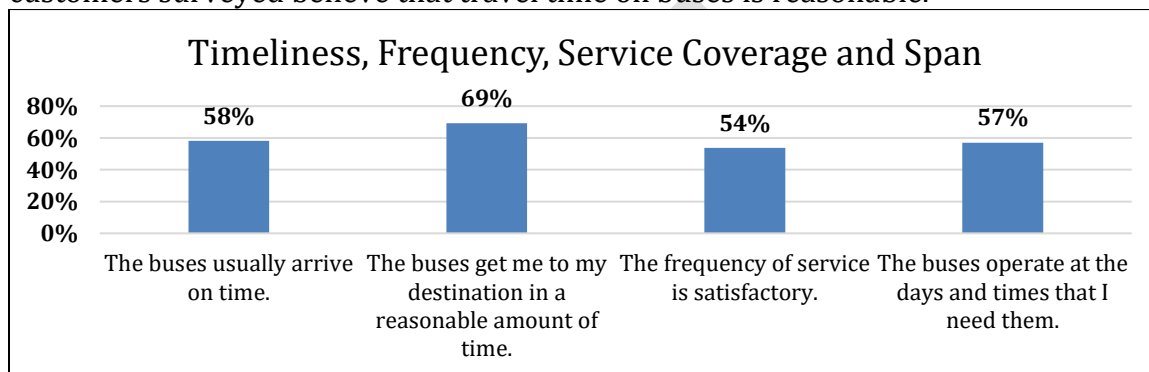


Figure 6. Customer ratings of timeliness, frequency, service coverage and span.

The majority of customers surveyed (84%) agree that transit fares are reasonable. Approximately three quarters (76%) of customers surveyed agree that the buses can take them where they need to go, indicating that routes provide reasonable coverage. 70% of customers surveyed agree that the bus routes are conveniently located for them.

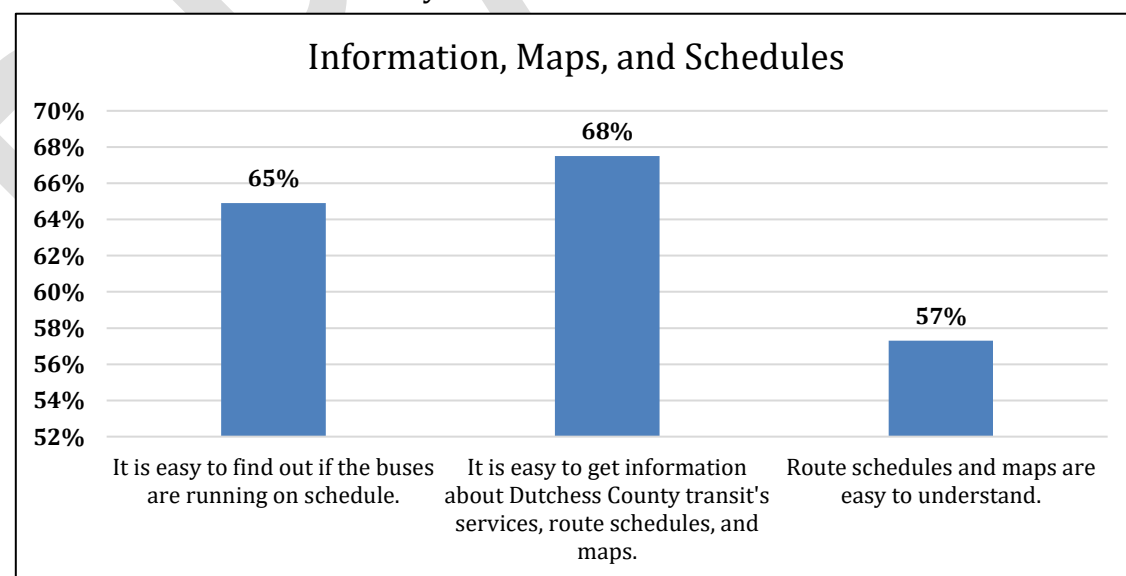


Figure 7. Customer ratings of access and ease of use of transit materials.

Only 57% of customers surveyed agree that Dutchess County Public Transit's schedules and maps are easy to understand, indicating that current materials may not be user-friendly. Slightly higher percentages of customers agree

that it is easy to find out if buses are running on schedule (65%) and that it is easy to get information about Dutchess County Public Transit's services, schedules, and maps (68%). In summation, more than half of customers generally feel they know how to get information about transit service, but have difficulty understanding those materials.

The vast majority of customers (89%) feel safe when riding the bus, and 90% agree that the buses are clean. Nearly 80% of customers surveyed found drivers helpful and courteous. In contrast, customer service is rated lower with 61% of customers rating representatives as helpful and courteous. Only 67% of customers contacting customer service indicated that their call was answered promptly, indicating that customers may be experiencing longer wait times.

Origin-Destination Data Analysis

Based on a combination of surveys and boarding and alighting data, the following analysis details trip origins and destinations as well as first/ast mile preferences.

Trip Category

Origins and destinations can be divided into functional categories to determine the purpose of transit trips. Half of all customers riding Routes C], CK, CL, CM, CN, CO and CP originate from home, with work and shopping taking major shares of the remaining origins. The majority of trip destinations are split between home (38%) and shopping (32%).

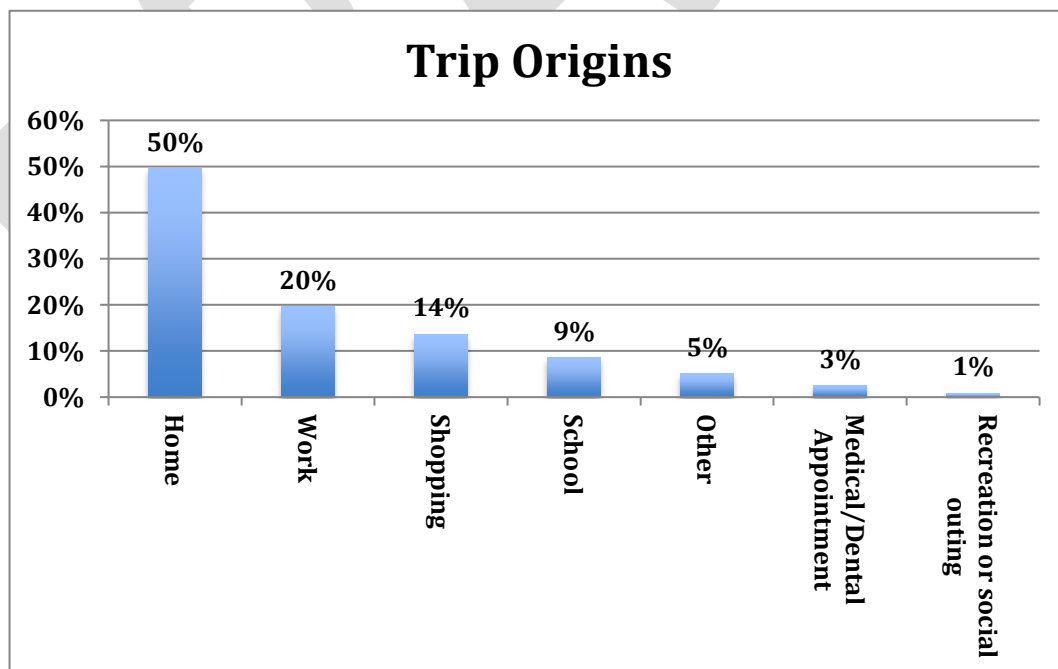


Figure 8. Surveyed customer origins by percentage.

Municipal Origins and Destinations

The vast majority of trips on routes within the City of Poughkeepsie begin (95%) and end (96%) within the city. This is likely a result of the historic operation of the city routes as a service administered by the city; separate from Dutchess County Public Transit routes. It is likely that ridership between neighboring towns, villages and cities will increase over time as the integrated transit system matures. The maps below illustrate the volume of customer boardings and alightings across the transit system.

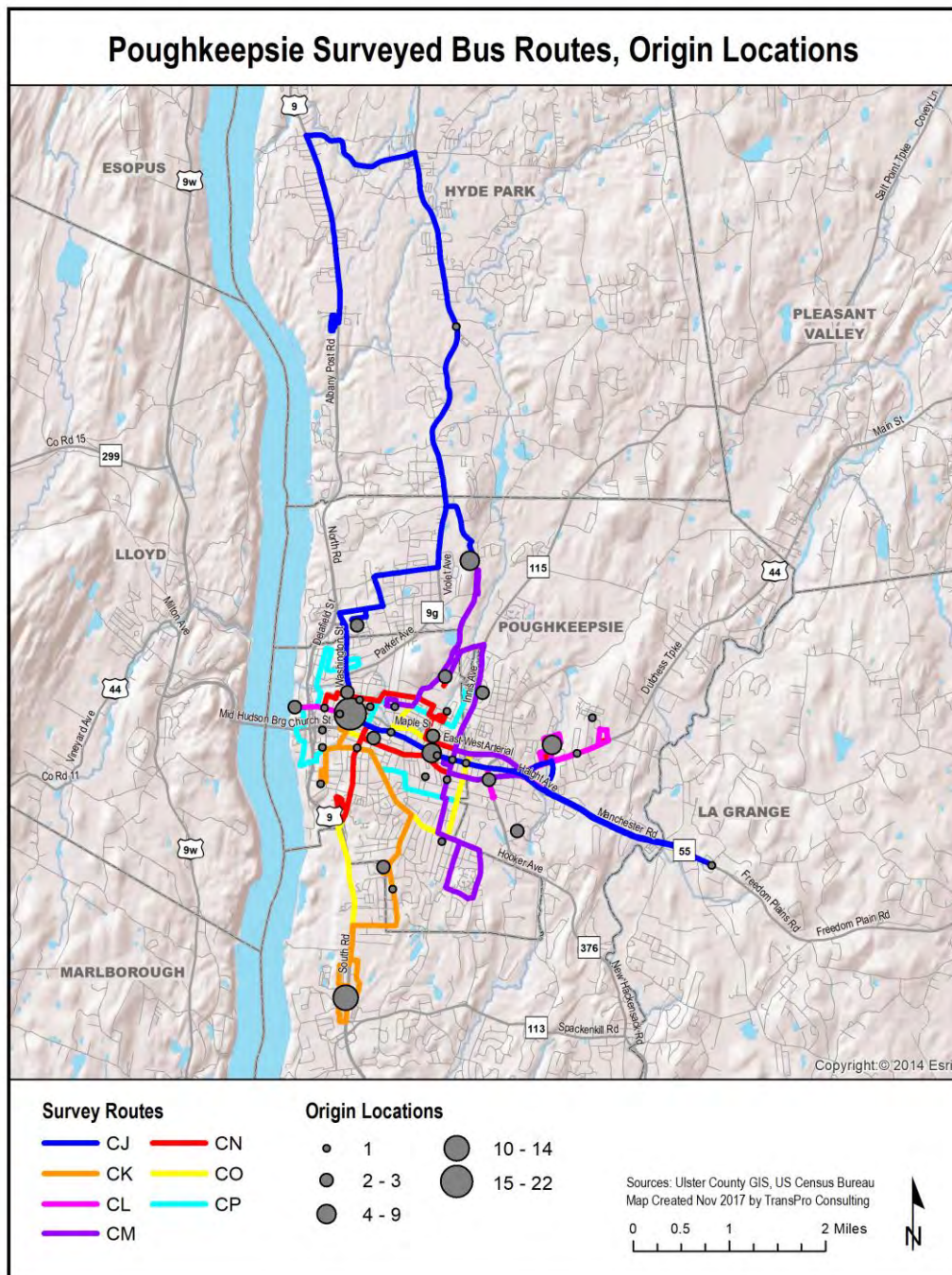


Figure 9. This figure details boarding volume by stop throughout the transit network.

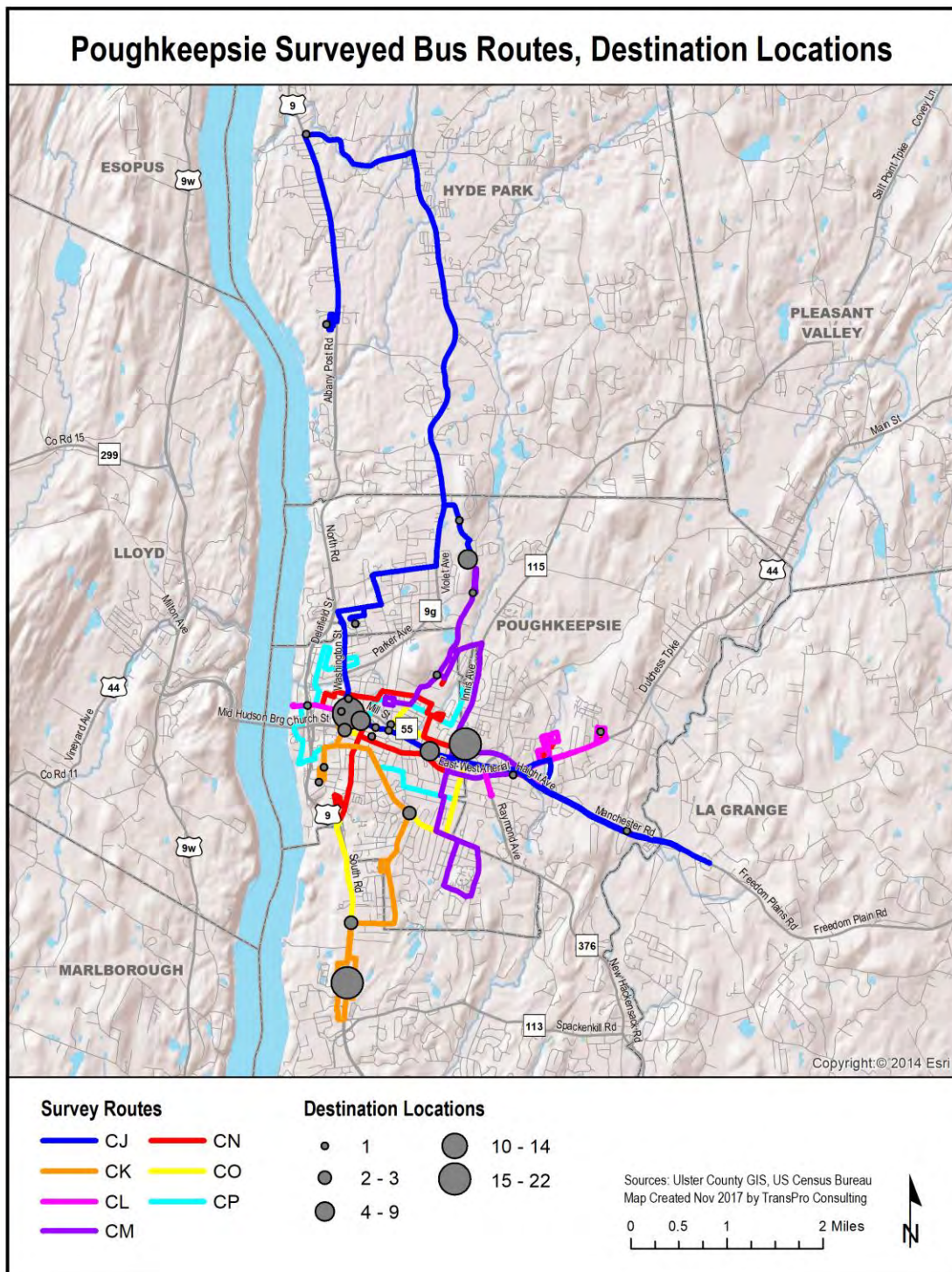


Figure 10. This figure details alighting volume by stop throughout the transit network.

First/Last Mile Analysis:

Walking is the predominant mode of travel to (80%) and from (95%) bus stops within the City of Poughkeepsie. Nearly 10% of customers at bus stops are transferring from one bus to another. Only 1% of customers are utilizing bicycles for first/last mile connections.

Primary Recommendations

Overview

The following recommendations represent a combination of route, policy, and aesthetic recommendations to achieve three primary goals:

1. Make the transit system more approachable for residents and visitors. This will be achieved through a simplification of route nomenclature and unifying the transfer policy across all Dutchess County Public Transit services.
2. Eliminate redundancy and streamline routes with no/low ridership. This will be achieved with reduced route times as follows:

Service Frequency by Route (in minutes)		
Route	Current	Proposed
CJ	80	60
CK	60	60
CL	74 AM/64 PM	30
CM	62	60
CN*	3 Trips per Day	NA
CO**	3 Trips per Day	NA
CP	45	60

*Route CN is eliminated under the proposed route structure.

**Route CO is eliminated under the proposed route structure.

Additional details of route changes are provided in the specific recommendation descriptions below.

3. Develop synchronized schedules which facilitate more efficient transfers for customers. This will be achieved through the following changes to service span and scheduling:

Route	Service Span by Route					
	Current			Proposed		
	Weekday	Saturday	Sunday	Weekday	Saturday	Sunday
CJ	5:50 AM-9:45 PM	5:50 AM-9:45 PM	NA	6:15 AM-8:11 PM	8:15 AM-7:11 PM	NA
CK	6:25 AM-11:25 PM	6:25 AM-11:25 PM	NA	6:15 AM-12:07 AM	7:15 AM-11:07 PM	NA
CL	6:15 AM-11:06 PM	6:15 AM-11:06 PM	NA	6:15 AM-10:45 PM	7:15 AM-10:45 PM	9:15 AM-5:45 PM
CM	6:22 AM-9:54 PM	6:22 AM-9:54 PM	NA	6:40 AM-8:42 PM	8:15 AM-7:42 PM	NA
CN*	8:30 AM-2:25 PM	NA	NA	NA	NA	NA
CO**	8:30 AM-2:40 PM	NA	NA	NA	NA	NA
CP	6:30 AM-9:27 PM	6:30 AM-9:27 PM	NA	6:05 AM-7:45 PM	7:35 AM-6:45 PM	NA

*Route CN operates Monday-only, and is eliminated under the proposed route structure.

**Route CO operates Friday-only, and is eliminated under the proposed route structure.

Detailed descriptions of specific recommendations are provided below followed by an analysis of service impacts.

Detailed Recommendation Descriptions

This proposed restructuring is composed of five primary features:

1. Proposed Nomenclature Simplification – Elimination of “Double Letter” City Routes

This recommendation calls for a unified single-letter nomenclature across all Dutchess County Public Transit routes, by eliminating the “C.” This serves three purposes:

- Simplifies the system map and route nomenclature to facilitate a broader understanding of the network.
- Eliminates exclusionary nomenclature such as “school tripper” and “shopping bus.”

2. Integrated Transfer Policy

A unified route nomenclature will require a simple transfer policy applicable across Dutchess County Public Transit services. Currently there is a 30 cent transfer fee between county buses and buses within the city limits.

3. *Proposed Route M (Restructuring of the Current Route CM)*

The current route CM has low ridership, and is frequently criticized for its lack of connections with other buses. This small change extends the route four blocks to the Hub and provides a connection to the Family Partnership Center. Service will also extend to Interfaith Towers and the Poughkeepsie Train Station in a one-way loop before serving the Hub. The revised Route M will no longer provide service to Fox Hills neighborhood (currently served by Dial-A-Ride and Route CM) or Dutchess Community College (currently served by the C], C and H routes).

Route Frequency:

- 60 Minutes

Hours of Operation:

- Mon to Fri - 6:40 a.m. to 8:42 p.m.
- Sat - 8:15 a.m. to 7:42 p.m.

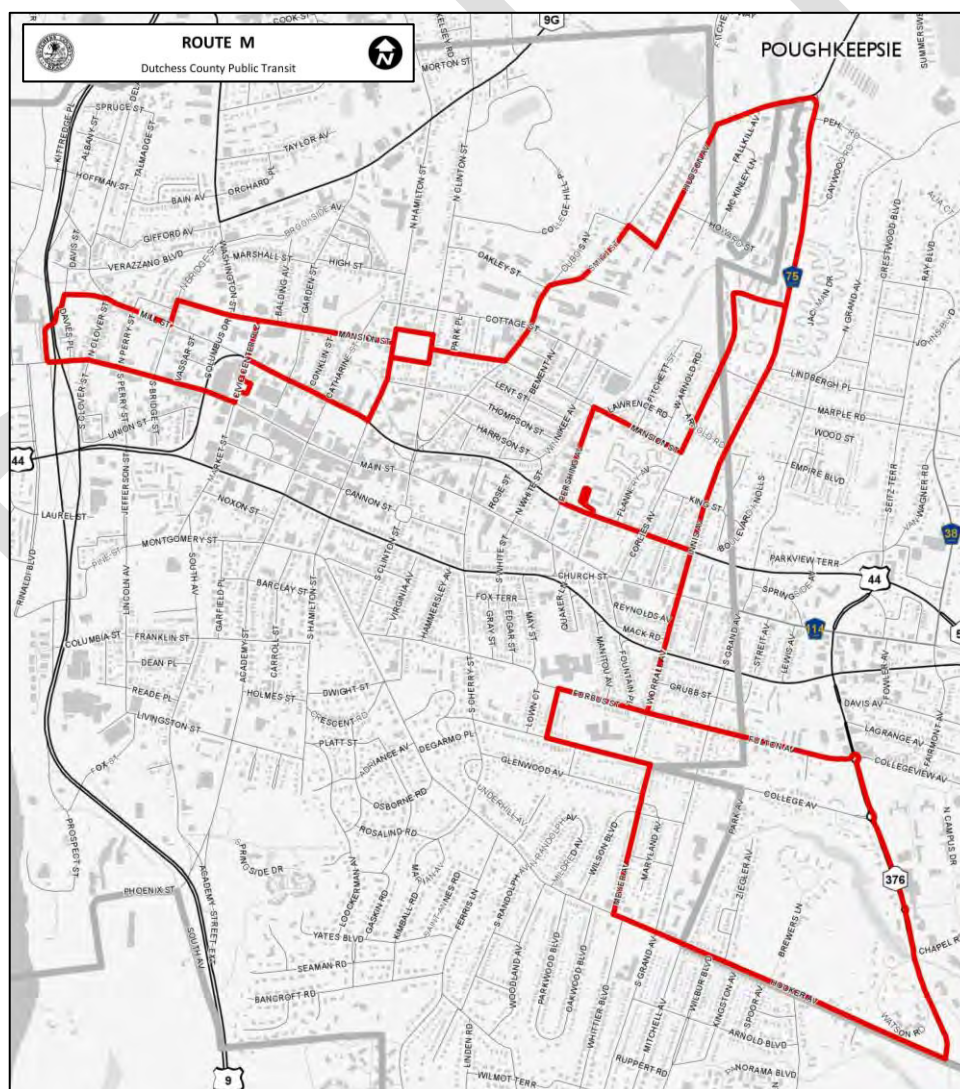


Figure 11. Map of Proposed Route M.

4. **Proposed Route P (Restructuring of the Current Route CP)**

This proposed restructuring of this route will provide two-way service to Interfaith Towers, 134 Cannon Street, and Poughkeepsie Train Station every 60 minutes in both directions. This proposed P route provides service from the Hub and Interfaith Towers to Taylor Ave via Washington Street as well as the Waterfront via Delafield St, North Clover St and Gerald Drive. In addition, this route provides service to Vassar College via Fulton Ave and College Ave.

Route Frequency:

- 60 Minutes

Hours of Operation:

- Mon to Fri - 6:05 a.m. to 7:45 p.m.
- Sat - 7:35 a.m. to 6:45 p.m.

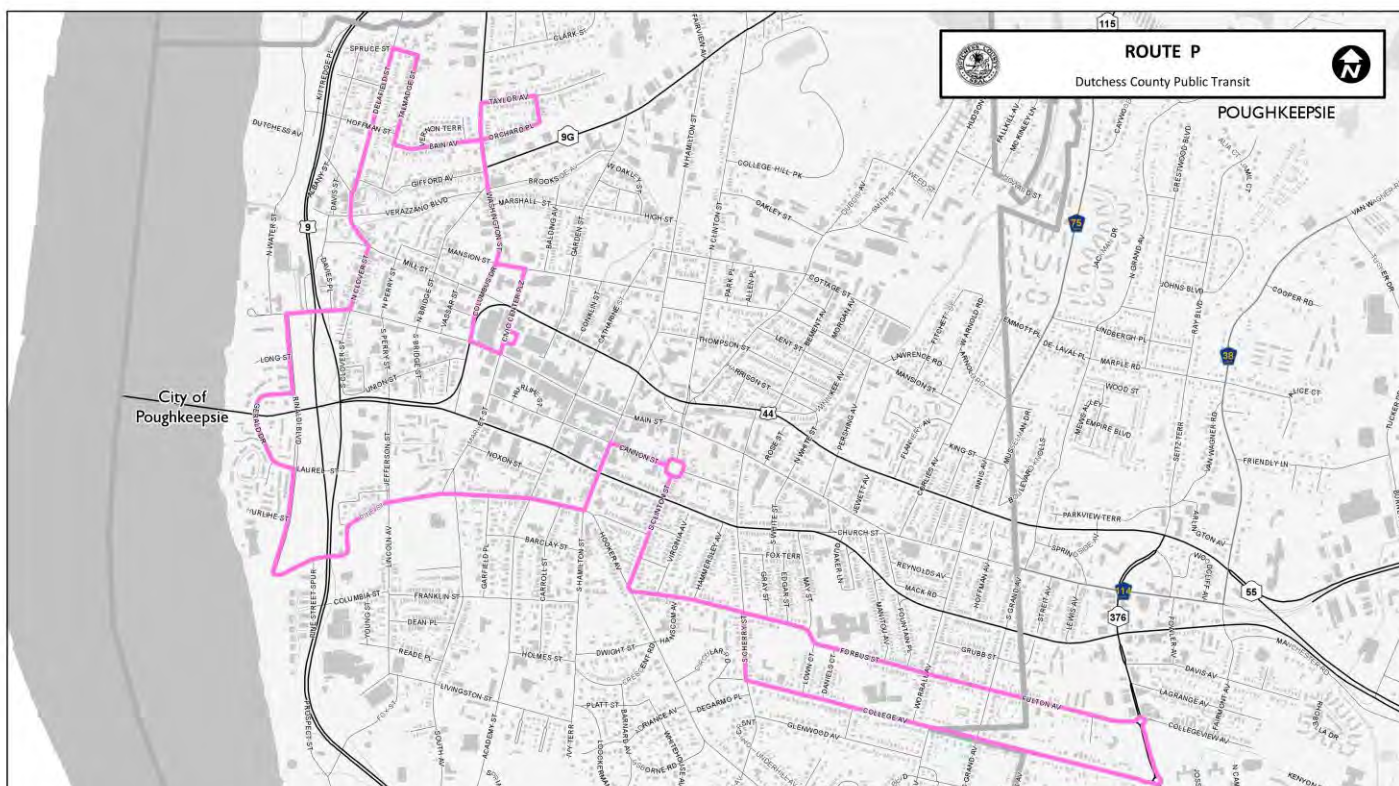


Figure 12. Map of Proposed Route P.

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5. **Proposed Route L (Restructuring of the Current Route CL)**

The proposed route L will provide service from the Hub to Adams Fairacres Farms via Main Street and Vassar College (North Drive Bus Shelter) every 30 minutes, with stops at the train station and Interfaith Towers in a one-way loop after service to the Hub. This revised route eliminates service to the river, saving time resulting from traffic congestion.

Route Frequency:

- 30 Minutes

Hours of Operation:

- Mon to Fri - 6:15 a.m. to 10:45 p.m.
- Sat - 7:15 a.m. to 10:45 p.m.
- Sun - 9:15 a.m. to 5:45 p.m.

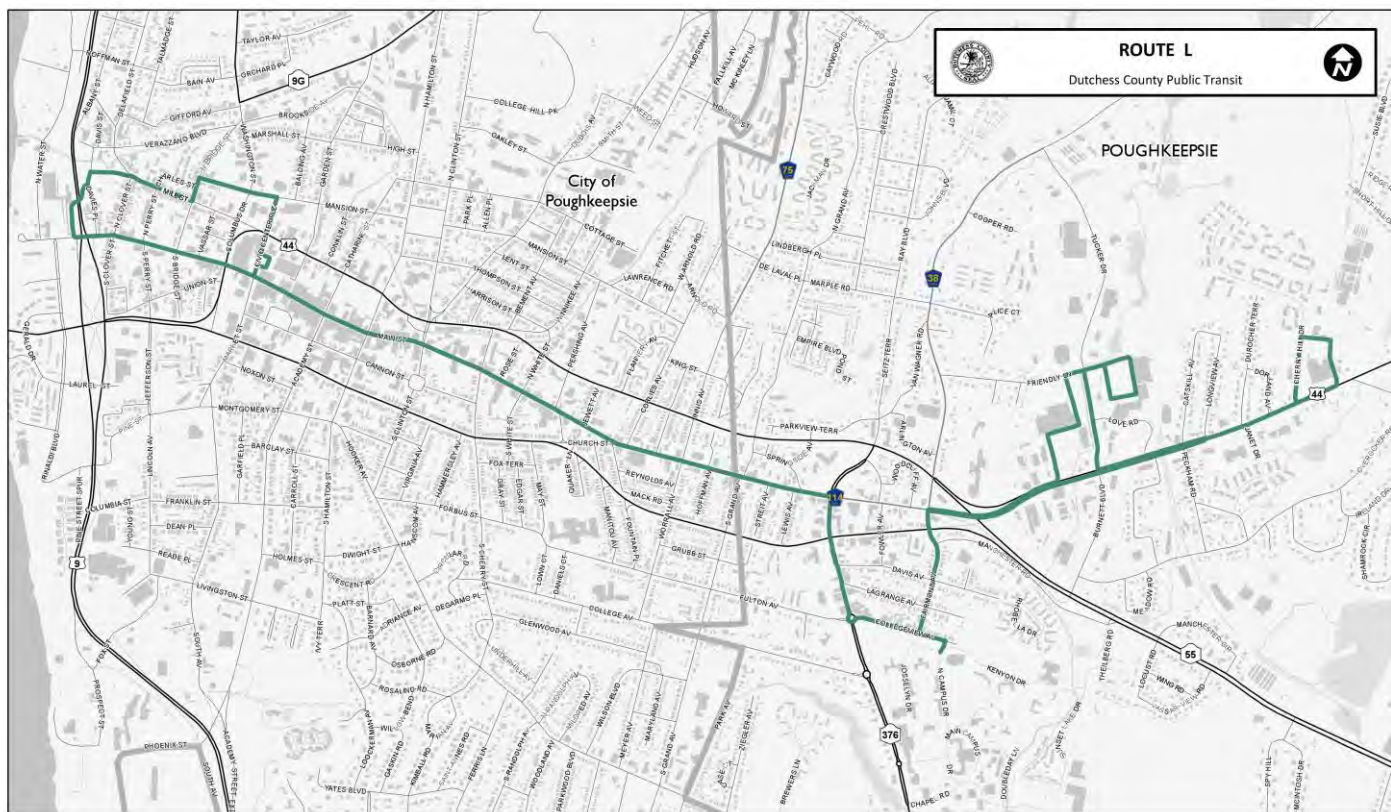


Figure 13. Map of proposed Route L.

6. **Proposed Route K (Restructuring of the Current Route CK)**

The proposed Route K will provide service between the Hub, Poughkeepsie Plaza, Hudson Plaza and Vassar Brothers Medical Center via Livingston and Academy Streets. Traveling south on NY State Route 9, Route K provides service to The Shoppes At South Hills and continues with service to Hudson Valley Regional Airport via Vassar Rd, and New Hackensack Rd.

Route Frequency:

- 60 Minutes

Hours of Operation:

- Mon to Fri - 6:15 a.m. to 12:07 a.m.
- Sat - 7:15 a.m. to 11:07 p.m.

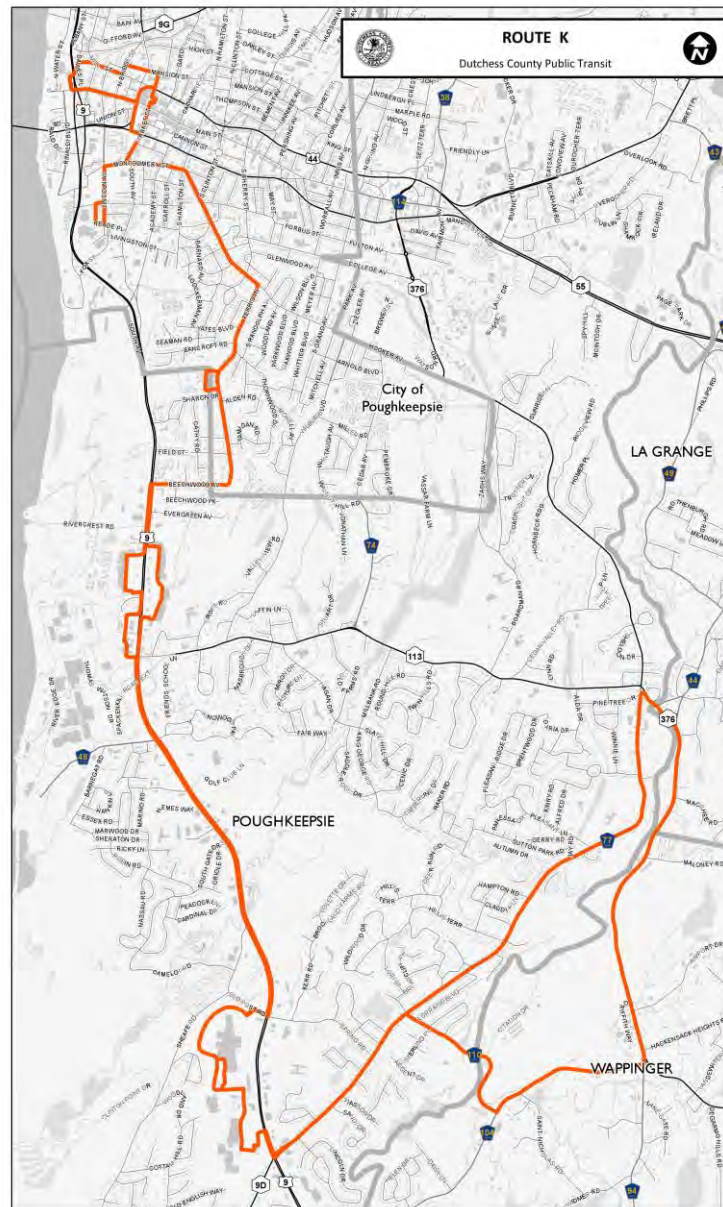


Figure 14. Map of proposed Route K.

7. **Proposed Route J (formerly Route C)**

The proposed J route will provide service from the Hub to the Stop and Shop in Hyde Park and Franklin D. Roosevelt Home Park. The route provides service to the Poughkeepsie Train Station and Interfaith Towers before traveling North on Washington Street, and continuing on State Route 9G. The route then runs west on route on St. Andrew Road before turning onto State Route 9 before arriving at Stop and Shop.

Route Frequency:

- 60 Minutes

Hours of Operation:

- Mon to Fri - 6:15 a.m. to 8:11 p.m.
- Sat - 8:15 a.m. to 7:11 p.m.

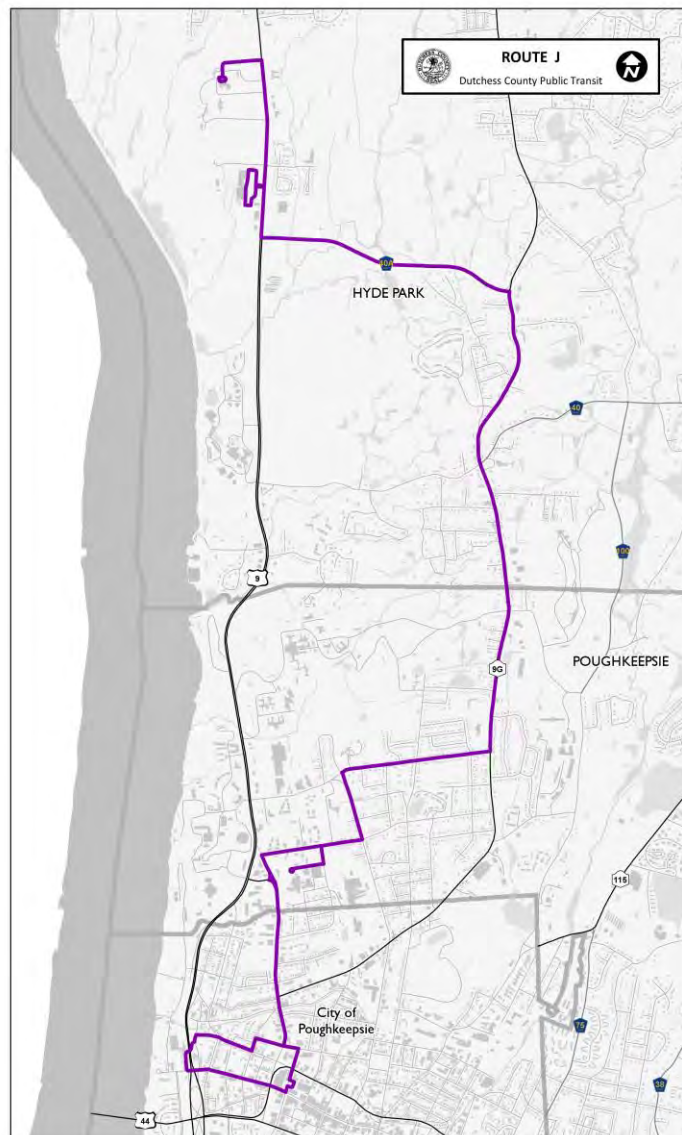


Figure 15. Map of proposed Route J.

8. *Elimination of Midday Service Gap with a Relief Bus Operator*

A relief bus operator should be engaged throughout the day to bus operators to go off-duty while the route remains in operation. Currently, transit service stops in the middle of the day to accommodate bus operator breaks. The operating rules stipulate that bus operators “will not have scheduled rest periods; but, they will be permitted reasonable breaks as opportunities allow, i.e., between runs, during waiting periods, etc...” This enables flexibility to stagger schedules such that there is no customer-facing lapse in service.

9. *Elimination of the Routes CN and CO*

The current routes CN and CO produce very little ridership, and operate redundant service with other bus routes. In light of proposed alterations to other routes within the City of Poughkeepsie, the elimination of these routes and reallocation of operational resources is recommended.

10. *Simplified Dial-A-Ride Service*

The City of Poughkeepsie has more fixed-route transit service coverage than before the transition of operations in July (from the City to the County). In light of this, and the cancelation of the CN and CO, the Dial-A-Ride service should transition into an active feeder service to fixed routes with simplified eligibility based on geography. Dutchess County Transit should establish Dial-A-Ride ‘Zones’ within the City of Poughkeepsie. These are designated areas within the city limits that are outside of the immediate transit coverage area. The boundaries of these zones will begin 1.5 miles away from fixed transit stops and terminate at the city limits. Residents within this zone can request transit service from their homes to the transit Hub.

1. Simple preapproval process based on address (users inside the zone qualify, those outside do not).
2. Once approved, customers will request service 24 hours or more in advance of their trip.
3. Customers will be dropped off at the Transit Hub for transfers to all other fixed transit routes.
 - Users will also provide a return time (when they plan to be at the Hub for the return trip).
4. Customers will be given a pickup window based on Dial-A-Ride route scheduling.

Analysis of Proposed Route & Schedule Changes

The proposed changes in Dutchess County Public Transit routes within the City of Poughkeepsie will yield an increase in city fixed route service hours. Most of this service hour increase is offset by service hour reductions on Dutchess County Public Transit Routes operating outside the City of Poughkeepsie. The table below indicates daily service hours by route for the

current service and the proposed service as well as comparison. The table includes only routes for which service changes are proposed.

Service Hour Changes by Route and Day of Week*									
Route	Current Daily Service Hours			Proposed Daily Service Hours			Change in Daily Service Hours		
	Weekday	Saturday	Sunday	Weekday	Saturday	Sunday	Weekday	Saturday	Sunday
A	No Change	No Change	9.86	No Change	No Change	10.66	No Change	No Change	0.80
B	No Change	No Change	9.39	No Change	No Change	11.53	No Change	No Change	2.14
F	No Change	No Change	9.38	No Change	No Change	6.86	No Change	No Change	-2.52
H	17.55	17.55	9.75	16.10	16.10	8.95	-1.45	-1.45	-0.80
I	17.63	17.63	No Change	0.00	0.00	No Change	-17.63	-17.63	No Change
J	15.75	15.75	No Change	14.43	11.42	No Change	-1.32	-4.33	No Change
K	17.00	17.00	No Change	35.40	30.72	No Change	18.40	13.72	No Change
L	17.18	17.18	0.00	31.00	24.50	9.00	13.82	7.32	9.00
M	15.56	15.56	No Change	14.70	12.20	No Change	-0.86	-3.36	No Change
N (Mondays)	9.00	No Change	No Change	0.00	No Change	No Change	-9.00	No Change	No Change
O (Fridays)	9.00	No Change	No Change	0.00	No Change	No Change	-9.00	No Change	No Change
P	14.90	14.90	No Change	14.25	12.25	No Change	-0.65	-2.65	No Change

*Table includes only routes for which changes are proposed

The fixed route service hour changes in the table above are summarized in the table below.

Service Hour Changes by Day, Week, and Year			
Service Day	Current	Proposed	Change
Average Weekday	119.17	125.88	6.71
Saturday	115.57	107.19	-8.38
Sunday	38.38	47.00	8.62
Weekly Total	749.80	783.59	33.79
Annual Total*	38,267	40,005	1,738

*Annual Total calculation assumes 252 weekdays, 54 Saturdays, and 52 Sundays for the current service in FY2017 and 249 weekdays, 58 Saturdays, and 52 Sundays for the proposed service in FY2018.

As indicated in the table above, the proposed fixed route changes would result in 33.79 additional fixed route service hours in a typical, non-holiday service week. This would result in 1,738 additional fixed route service hours were the proposed service to operate for all of FY2018 compared to the corresponding scheduled service hours operated in FY2017.

Additional Route Adjustment Option For Revenue Hour Neutrality

The proposed fixed route structure increases service frequency and eliminates the midday service gap on City routes. The route reconfiguration that produces these benefits yields utilizes 6.7 additional service hours on weekdays, 8.38 fewer hours on Saturdays, and 8.62 additional hours on Sundays. Over the course of a year, the cumulative effect of these small service hour changes results in approximately 1,700 additional annual

service hours. As there is a cost to operating additional service hours, TransPro has identified an option for service changes to the proposed service profile. This option would enable Dutchess County to operate within 80 hours of the current level of annual service hour deployment. The table below indicates specific changes and impacts for additional route adjustments.

Additional Route Adjustments: Scenario 1				
Route	Adjustment	Weekday Service Hour Reduction	Saturday Service Hour Reduction	Notes
C	Eliminate last Weekday northbound and southbound trips (10:15 Northbound, 11:00 Southbound). Route would finish at 11:23 PM instead of 11:36 PM.	1.25		The current northbound trip averaged 0.6 customers in 2017 Q4
G	Eliminate last weekday trip (6:15 PM). Route would finish at 6:46 PM instead of 7:21 PM.	0.58		This trip averaged 0.6 customers in 2017 Q4
G	Eliminate last Saturday trip (6:15 PM). Route would finish at 6:46 PM instead of 7:21 PM.		0.58	This mirrors the weekday Route G trip adjustment listed above
K	Eliminate last weekday round trip (10:15 Southbound & 11:15 Northbound). Route would finish at 11:07 PM instead of 12:07 AM.	2.00		This round trip averaged 0.1 customers in 2017 Q4
K	Eliminate last Saturday round trip (9:15 Southbound & 10:15 Northbound). Route would finish at 10:07 PM instead of 11:07 PM.		2.00	Service ends one hour earlier, similar to the weekday Route K adjustment listed above
L	Eliminate last weekday westbound and eastbound trips (9:45 Westbound, 10:15 Eastbound). Route would finish at 9:45 PM instead of 10:45 PM.	1.00		This round trip averaged 0.7 customers in 2017 Q4
L	End weekday 30-minute service at 7:15 instead of 8:15 (eliminates 7:15 Westbound, 7:45 Eastbound)	1.00		60 minute frequency would be maintained after 7:15, which is still improves upon the current level of frequency
L	Eliminate last Saturday westbound and eastbound trips (9:45 Westbound, 10:15 Eastbound). Route would finish at 9:45 PM instead of 10:45 PM.		1.00	This mirrors the weekday Route L trip adjustment listed above

The changes indicated above yield 5.83 fewer weekday service hours and 3.58 fewer Saturday service hours than the proposed fixed route structure. The impact of these service hour reductions is indicated in the table below.

Service Hour Changes by Day, Week, and Year			
Service Day	Current	Scenario 1	Change
Average Weekday	119.17	120.05	0.88
Saturday	115.57	103.61	-11.96
Sunday	38.38	47.00	8.62
Weekly Total	749.80	750.86	1.06
Annual Total*	38,267	38,346	78

*Annual Total calculation assumes 252 weekdays, 54 Saturdays, and 52 Sundays for the current service in FY2017 and 249 weekdays, 58 Saturdays, and 52 Sundays for the proposed service in FY2018.

As indicated in the table above, these service changes require less than 80 additional annual service hours compared to the current fixed route service profile.

Additional Recommendations

Overview

TransPro's analysis yielded several additional recommendations for future consideration:

- Consolidation of the Routes CM & CP** – Currently route CP runs in a circular pattern through the City of Poughkeepsie, running both north and south of the Main Street corridor. This type of route can lead to longer ride times for transit customers located near key destinations along routes operating in a single direction. The adjacent route CM covers a similar area in both the northern and southern areas of the city. Consolidating these routes can create considerable efficiencies and shorter ride times. The northern section of the current route CP would be amended to include the northern half of current route CM.
- Mark Bus Stop Locations with a Unified Design; Including Route Names, Schedules, and Maps** – Discussions with transit customers yielded repeated concerns about knowing where to wait for buses. This is reflected by the considerable number of flag boardings and alightings across all routes. Dutchess County Public Transit should conduct a detailed siting survey to determine exact bus stop locations. Once sited, bus stops should be designed to reflect a unified look and feel across all Dutchess County Public Transit bus routes. These would include:
 - A banner indicating stop name and route letter.
 - Information kiosk with relevant bus schedules and a map.
 - Higher volume stops may benefit from shelters with seating and overhead canopies to protect passengers from weather conditions.
- Phased Elimination of Flag Stops** – Data from TransPro's one-day ride checks indicates a high volume of customers boarding and alighting outside of designated bus stops. Route CK, in particular, highlights a considerable dependence on flagging with more than 21% of customers waving down the bus for pickup. Flag stops create inefficiencies for bus operators by introducing unplanned stops which may impact time tables.

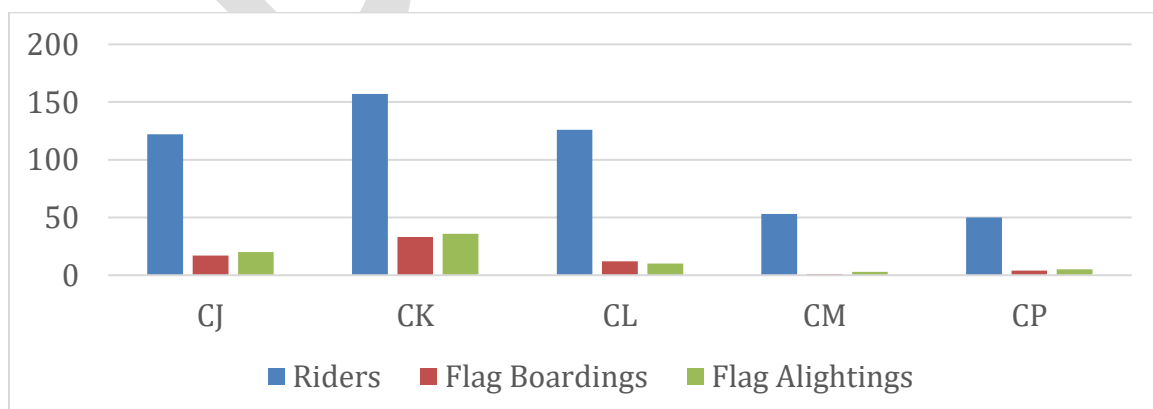
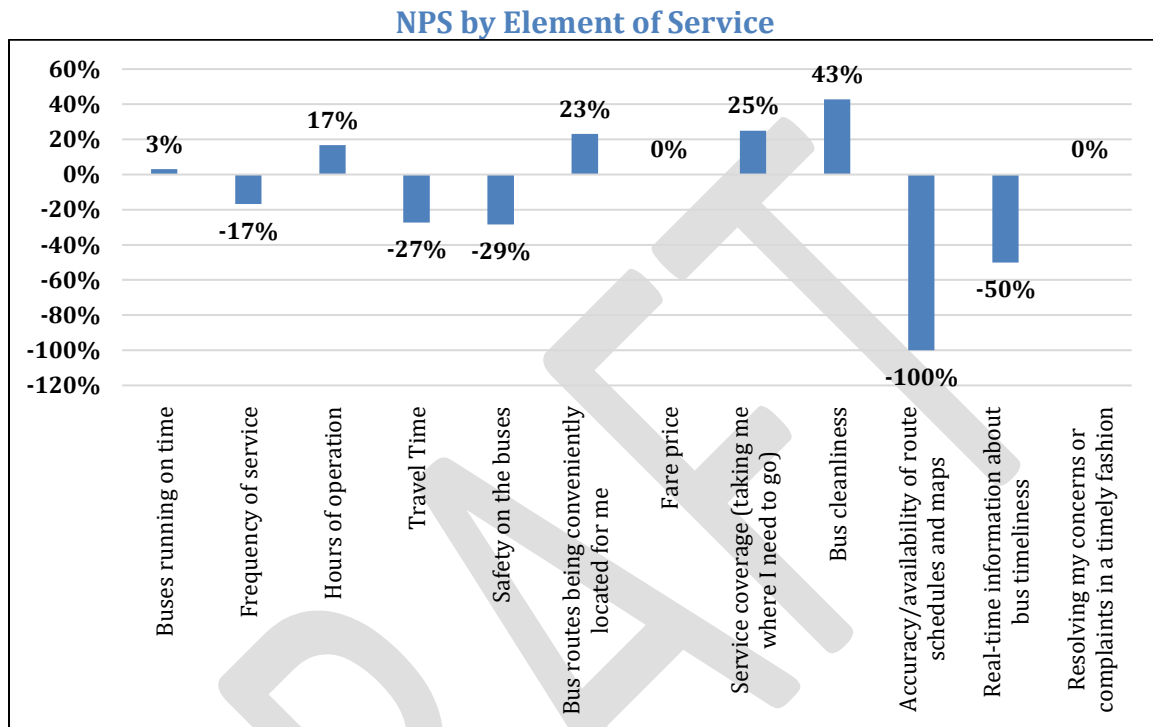


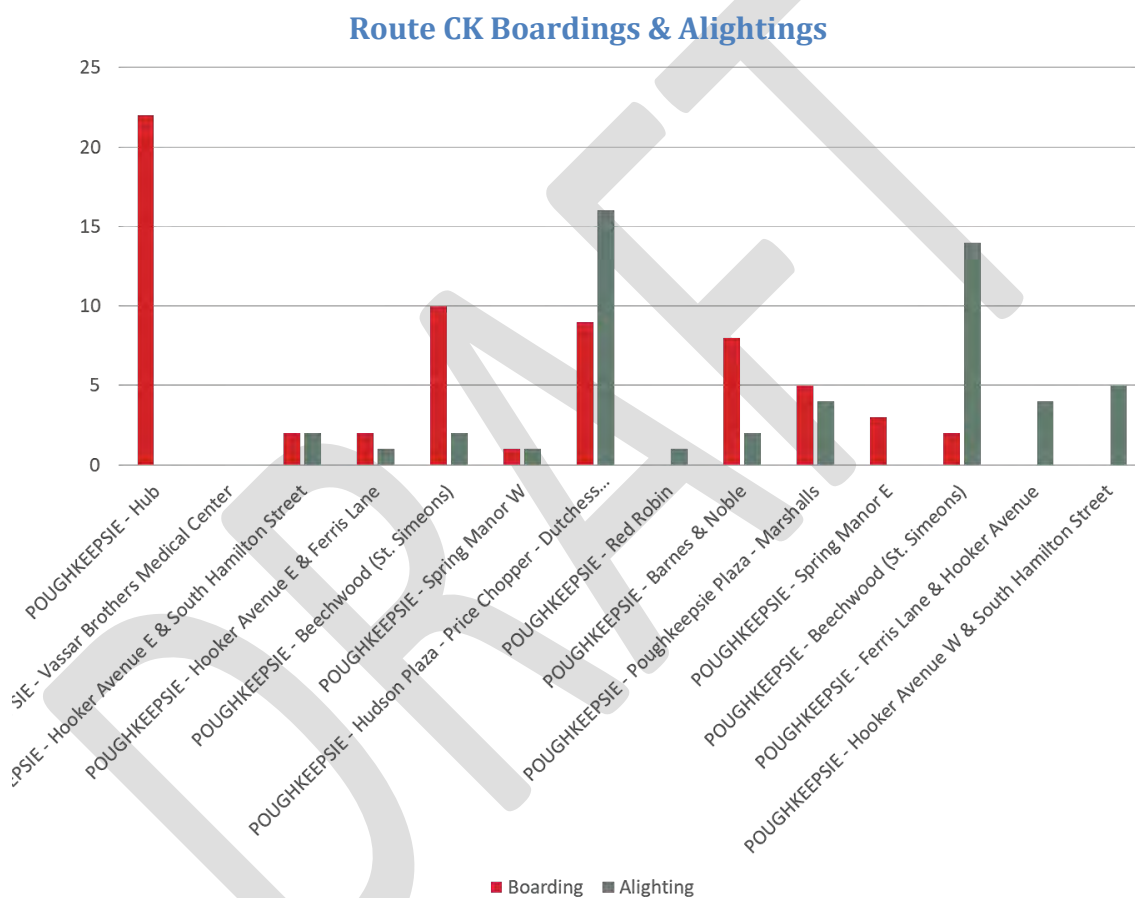
Figure 16. Flag boardings & alightings across routes CJ, CK, CL, CM, and CP compared to total number of passenger trips.

Appendix A: Additional Customer Satisfaction Tables



Appendix B: Ride Check Boarding & Alighting Tables

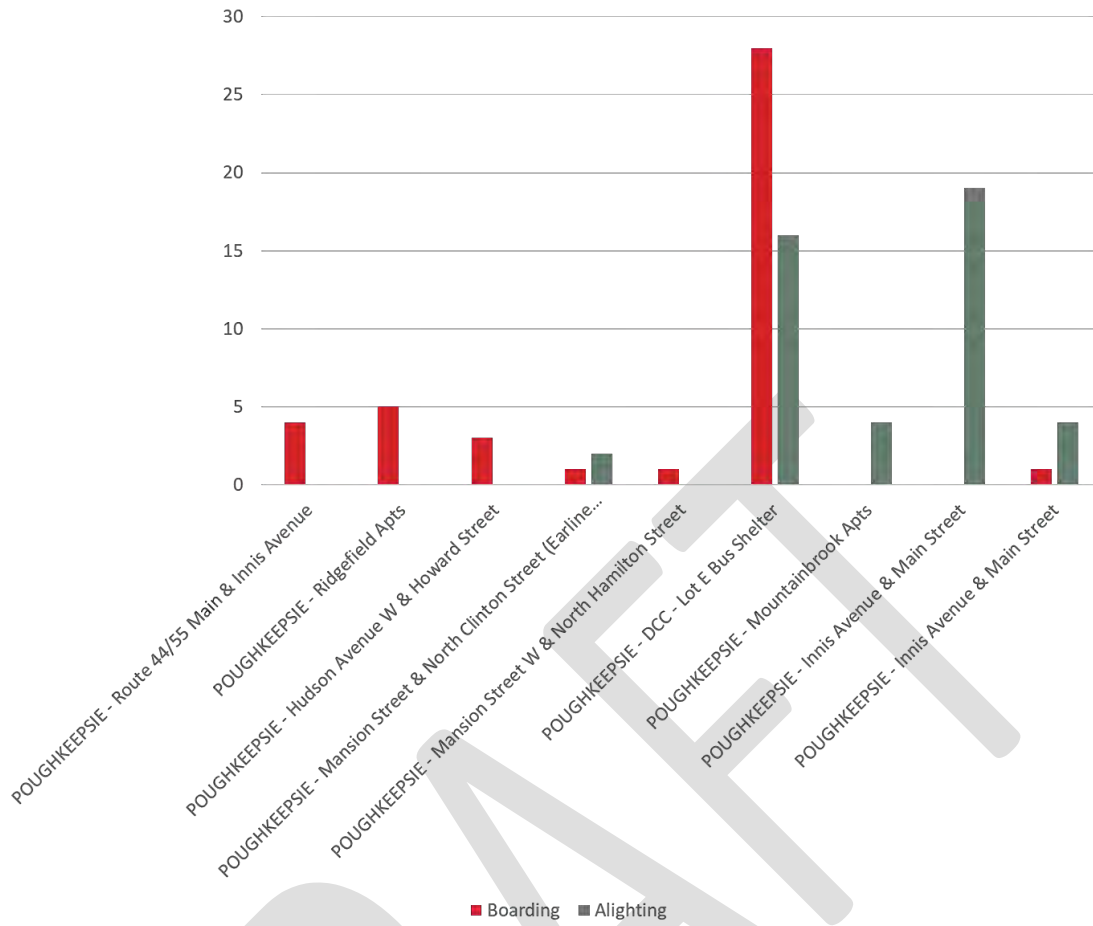
TransPro performed independent customer satisfaction surveys and ride checks on all routes within the City of Poughkeepsie. The ride checks included boarding and alighting tallies for each stop on these routes, providing a one-day snap shot of ridership for the CJ, CK, CL, CM, CP, CN and CO bus routes. These ride checks and surveys were conducted September 20-22, 25-27, 30, and October 3-5, 2017. A total of 117 customers were surveyed. Boarding and alighting data contained in these charts represents one full day of service.



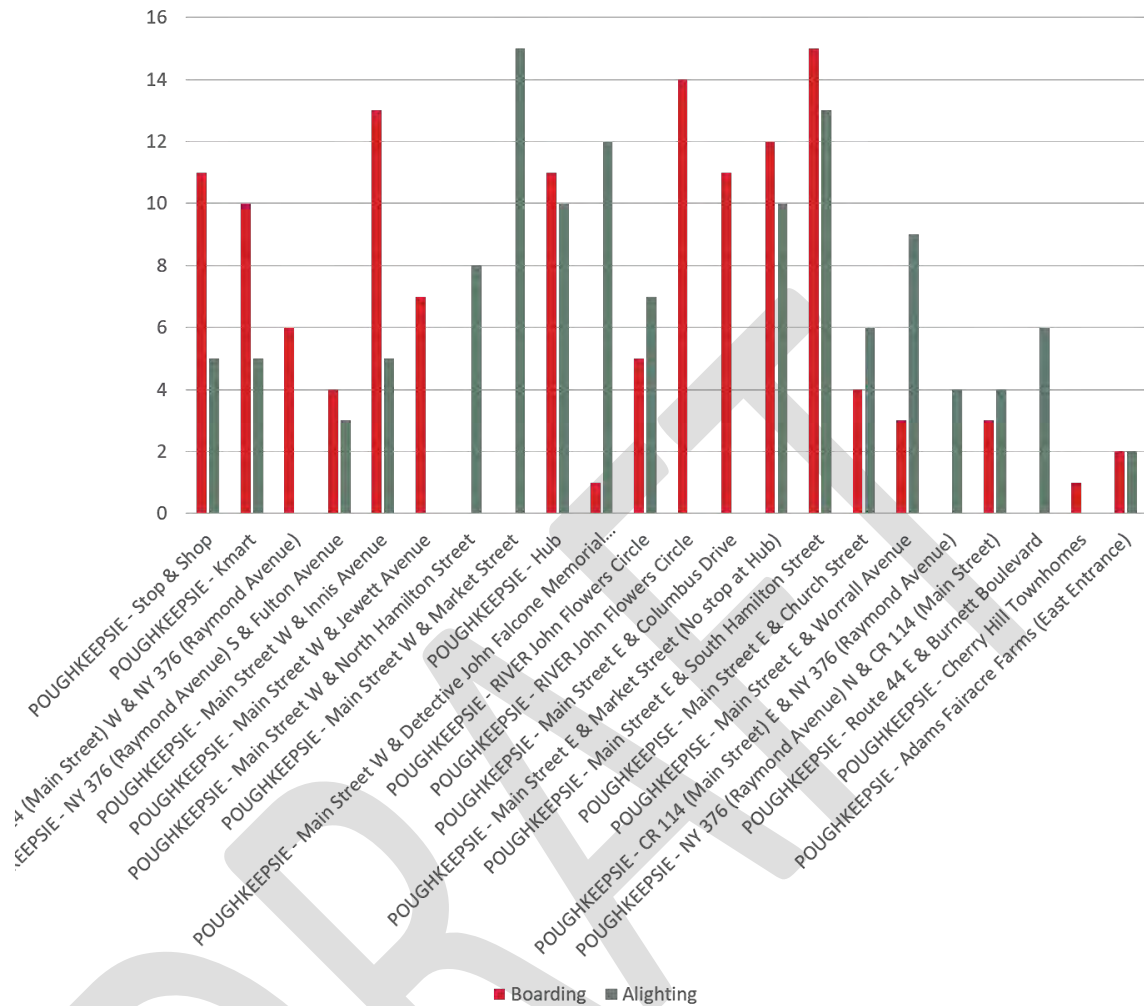
Route CJ Boardings & Alightings

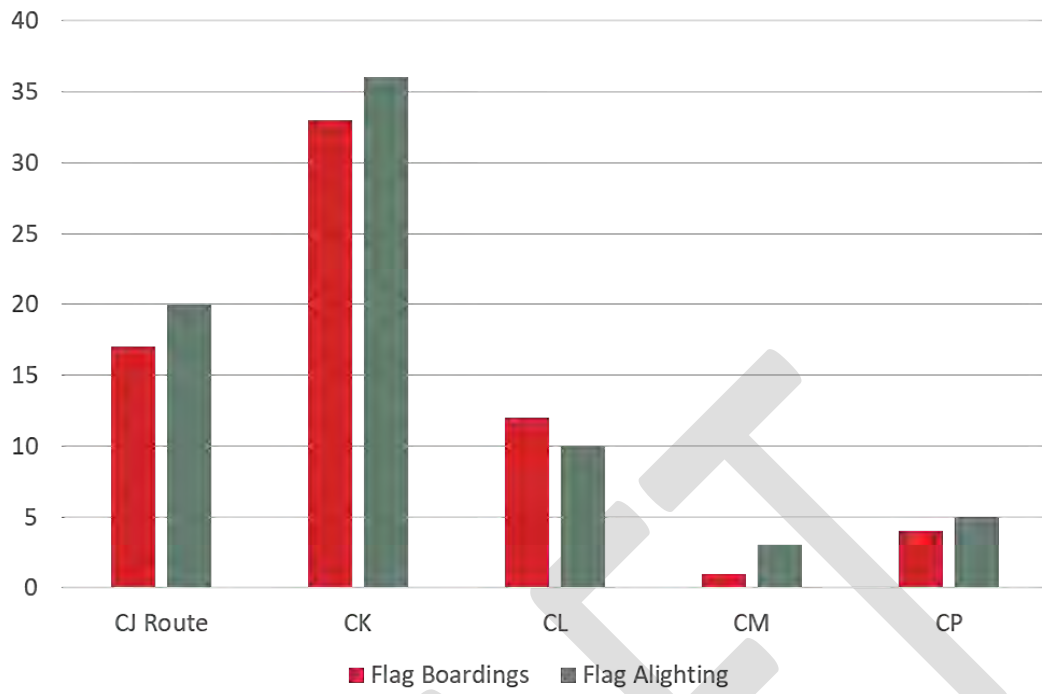


Route CM Boardings & Alightings



Route CL Boardings & Alightings



Flag Stops by Route

Appendix C: Dutchess County Public Transit Open House Public Comment Log

#	Description	Categories (Nomenclature, routes, schedules, etc)
1.	Change stop #s to name of bus route with schedule at that stop... EX: CL EastBound/CLWestbound – Should be easy to read on digital sign	Bus Stops; nomenclature; signage
2.	Consistency with Xfers... why no xfers allowed with County Lines? All the same company now.	Transfer policy
3.	Fixed route from Innis Ave (Mountain Brook) to Mike Artega's	Bus Routes
4.	Buses along roads w/lots of cars currently – Hooker Ave etc. so more people use bus and leave car at home	Misc.
5.	I would like to use my uni-ticket for the rail-Link when there is no Rail Link from the train station. use uni ticket on all buses	Fare Interoperability
6.	Use Transit App to track bus arrivals & departures	Mobile Applications
7.	Better Xfer system. Drivers using too much time completing xfers. Many of them may not have xfers.	Transfer policy
8.	Coordinate for connections so next bus might wait a couple minutes if bus gets held up by something	Schedules
9.	Route Maps along route and bigger signs for stops to encourage drivers to take bus instead	Signage; bus stops
10.	Route B routinely makes 2x trips to train station w/I 5-7 minutes. This is not efficient but a doubling of work with not much productivity	Schedules
11.	The App to access City Routes in regards to departures and arrivals	Mobile applications
12.	Heavily populated routes A,B especially should run every hour all day long.	Schedules
13.	Enter Routes into google so google will map them.	Mobile applications
14.	Phone app to tell where buses are (similar to Uber App).	Mobile Applications
15.	Run buses to Beacon, stadium and various shopper specials	Bus routes
16.	Color coded bus labels (like NYC subways) Better route map w/ all routes like NYC subway map	Nomenclature
17.	Better service to RIP on the waterfront	Bus Routes
18.	CM should connect to the shopping center similar to CJ, CK, CL	Bus Routes
19.	Transfers – how will they be handled to be paid initial bus or transfer to bus?	Transfer Policy

20.	Sunday service, especially on Sunday night for Metro North riders	Schedules
21.	Interactive Digital touch screens at to get transit info and map out route, etc.	Mobile Applications
22.	Clear bus stop lines which have bus stops here and directions plus schedule of when bus is expected at that stop	Schedule; Signage; Nomenclature
23.	The CP route is always late on the 2 nd run. The times need to change.	Schedules
24.	Give us a bus at Hopewell Junction across from E Fishkill Town Hall on 376 and more often and not lapse for 3.75 hours in the middle of the day	Bus Routes; Schedules
25.	Put the shoppers bus on Monday and Friday All Day; when the city had the buses I was on them 6 days a week. 2hours to wait for a bus is too long – every hour is good	Schedules
26.	City school tripper is not convenient for students; Krieger students are not serviced ; smith street projects children go to Krieger; if parent misses bus they spend more time connecting than riding. This applies to Martin Luther King children also; Rip Van Winkle Children don't get to Morse School on Mansion; School tripper goes to Ridgefield, Mountainbrook those are not city of Poughkeepsie schools	Bus Routes
27.	The CK & CL can run every hour on the hour	Schedules
28.	Route CM does not go to the hub or any shopping center... can connect with CK & CL	

Appendix D: TransPro Customer Satisfaction Survey Instrument

Customer Satisfaction Survey Instrument

Prepared by TransPro Consulting

September 6, 2017



1. Where are you coming FROM?*
 - a. Home
 - b. Work
 - c. Shopping
 - d. Medical/Dental Appointment
 - e. Recreation or social outing
 - f. School (Insert name of school):

 - g. Other (Please explain):

2. Where is this place? Please provide information regarding the nearest intersection or a nearby landmark (Examples: Freedom Plains Road & Commerce Street; Poughkeepsie Plaza; Kmart) and the Town.*
3. How did you GET TO the bus stop to board THIS bus?*
 - a. Transferred from another bus route
 - b. Biked
 - c. Walked (How many minutes?):

 - d. Drove to bus stop
 - e. Was dropped off at bus stop
 - f. Other (Please explain):

4. Where are you going TO?*
 - a. Home
 - b. Work
 - c. Shopping
 - d. Medical/Dental Appointment
 - e. Recreation or social outing
 - f. School (Insert name of school):

 - g. Other (Please explain):

5. Where is this place? Please provide information regarding the nearest intersection or a nearby landmark (Examples: Freedom Plains Road & Commerce Street; Poughkeepsie Plaza; Kmart) and the Town.*
6. How will you GET FROM this bus to your destination?*
 - a. Transfer to another bus route
 - b. Bike
 - c. Walk (How many minutes?):

 - d. Drive from bus stop
 - e. Get picked up from bus stop

f. Other (Please explain):

7. When did you begin using the Dutchess County public transit service?
- After Dutchess County implemented the new transit routes serving Poughkeepsie on July 1, 2017
 - Before Dutchess County implemented the new transit routes serving Poughkeepsie on July 1, 2017

8. All things considered, how likely would you be to recommend riding a Dutchess County transit bus to a friend or neighbor? *(On a scale of 0 to 10, where 0 means "Not at all likely" and 10 means "Very likely.")*

On a scale of 1-5 where 1 means "Strongly Disagree" and 5 means "Strongly Agree" please tell us how much you agree with the following statements:

9. The buses usually run on time.
- (The following question is only asked to customers who select 3 or lower for Question 9)* How many minutes do you feel is acceptable for a bus to arrive beyond its scheduled arrival time? _____
10. The buses get me to my destination in a reasonable amount of time.
11. The bus routes are conveniently located for me.
12. The buses can take me to the places I need to go.
13. The frequency of service is satisfactory.
14. The buses operate on the days and at the times that I need them.
15. Transit fares are reasonable.
16. The buses are clean.
17. I feel safe riding the buses.
18. It is easy to find out if the buses are running on schedule.
19. It is easy to get information about Dutchess County transit's services, route schedules, and maps.
20. Route schedules and maps are easy to understand.
21. Bus drivers are helpful and courteous.
22. When I call Dutchess County transit Customer Service, my calls are answered promptly. *(An option for "Not Applicable" will be available for this question).*
- (The following question is not asked to customers who select "Not Applicable" for Question 13)* When I do call, Dutchess County transit's Customer Service Representatives are helpful and courteous.

23. Have you contacted Dutchess County transit with a question, concern, or complaint in the last three months?

a. *(The following question is only asked to customers who select "Yes" for Question 14)* Was your issue resolved?

24. On a scale of 1-5 where 1 means "Very Dissatisfied" and 5 means "Very Satisfied" how satisfied are you with the overall quality of the Dutchess County transit service?

25. From the list below, please select the most, second-most, and third-most important areas of service for you as a public transportation user.

- Buses running on time
- Travel time
- Bus routes being conveniently located for me
- Service coverage (taking me where I need to go)
- Frequency of service
- Hours of operation
- Fare price
- Bus cleanliness
- Safety on the buses
- Real-time information about bus timeliness
- Accuracy/availability of route schedules and maps
- Drivers being helpful and courteous
- Customer service representatives being helpful and courteous
- Resolving my concerns or complaints in a timely fashion

26. Do you have a choice whether to use the bus or not? (such as walking, driving, getting a ride)

a. *(The following question is only asked to customers who answered "Yes" to Question 26)* What is the #1 reason you choose to use public transit?

Please select only one.

- i. The buses come so often it's just as convenient.
- ii. It's better for the environment.
- iii. I want to save money on gas, parking, and other car expenses.
- iv. I want to be able to work instead of driving.
- v. I want to be able to drink/have fun without worrying about driving.
- vi. I want to support public transit.
- vii. Other (write in) _____

27. How often do you ride the buses?

- a. More than 5 days per week
- b. 3-4 days per week
- c. 1-2 days per week
- d. Less than once per week but more than once per month
- e. Once per month or less

28. What is your most frequent trip purpose? Please select only one.

- a. Work
- b. Education
- c. Medical appointments
- d. Leisure and recreation
- e. Shopping
- f. Other (write in) _____